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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,770	07/17/2006	Roger Scattergood	K0181.70020US00	1614
23628 7590 11/25/2009 WOLF GREENFIELD & SACKS, P.C. 600 ATLANTIC AVENUE BOSTON, MA 02210-2206				
EXAMINER				
HINES, LATOSHIA D				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
11/25/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/542,770

**Applicant(s)**

SCATTERGOOD, ROGER

**Examiner**

LATOSHA HINES

**Art Unit**

1797

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27, 29-41 and 43-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27, 29-41, and 43-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This is the third Office action based on the 11/677896 application filed on February 22, 2007.
2. Claims 1-27, 29-41, and 43-46 are pending and have been fully considered. Claims 28 and 42 have been canceled.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1-27, 29-41 and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over WAKEFIELD (WO 03/040270 A2).

Wakefield discloses a fuel or fuel additives comprising particles of cerium oxide which have been doped with divalent or trivalent metal or metalloid which is a rare earth metal, a transition metal or a metal of group IIA, IIIB, VB, or VIB of the Periodic Table, meeting the limitation of claims 2-3 and 32. The cerium oxide

must be of a nanocrystalline nature, for example they should be less than 1 micron in size and preferably 1-300 nm in size, on page 1 lines 22-28 of Wakefield, meeting the limitation of claims 6-7. The metal or metalloid on page 2 lines 16-29 of Wakefield, in particular are Rh, Cu, Ag, Au, Pd, Pt, Sb, Se, Fe, Ga, Mg, Mn, Cr, Be, B, Co, V and Ca as well as Pr, Sm and Gd, meeting the limitation of claims 4-5.

Wakefield discloses on page 5 lines 10-20, the coating agent is suitably an organic acid, anhydride or ester or a Lewis base. The coating agent is preferably an organic carboxylic acid or an anhydride, typically one possessing at least 8 carbons. A preferred anhydride is dodecylsuccinic anhydride, meeting the limitation of claims 8-11.

Wakefield discloses in claim 13 the fuel is diesel, meeting the limitations of claim 12.

Wakefield discloses on page 9 lines 5-7, non polar organic solvent such as aromatic and aliphatic hydrocarbon, meeting the limitation of claim 13 and 41. Wakefield discloses on page 10 lines 13-14, the additives are added directly at the refinery. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the various refinery techniques of applicant's in the process of producing and making fuel for internal combustion engines, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a

matter of obvious design choice. *In re Leshin*, 125 USPQ 416, meeting the limitation of claims 14-16.

Wakefield discloses on page 9 lines 10-30, the cerium oxide is added together with one or more of a detergents, dehazers, anti-foaming agents, ignition improvers, anti-rust agents, re-odorants, anti-oxidants, metal deactivators, or lubricity agents, meeting limitation of claims 17-18, 25, 39-40.

Wakefield discloses on page 9 lines 10-11, the detergents are hydrocarbyl-substituted amines and amides for example a polyisobutenyl succinimide, meeting the limitations of claims 19-24, 29, 33-37, and 43-46.

Wakefield discloses on page 8 lines 1-9, cerium oxide particles obtained in the concentration of about 4 ppm, meeting the limitations of claims 26-27 and 30-31.

The examiner is of the position a reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545,549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968). In addition, "A reference can be used for all its realistically teachings and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

***Response to Arguments***

6. Applicant's arguments see pages 9-11, filed July 23, 2009, with respect to claims 1-27, 29-41, and 43-46 have been fully considered and are persuasive. The rejection under 35 USC 103, Hazarika et al. in view of Allen et al. of claims 1-46 has been withdrawn.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LATOSHA HINES whose telephone number is 571-270-5551. The examiner can normally be reached on Monday thru Thursday from 8 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Marcheschi can be reached on 571-272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LATOSHA HINES/  
Examiner, Art Unit 1797

/Ellen M McAvoy/  
Primary Examiner, Art Unit 1797